

## Features

- Surface mount and through-hole versions
- 12 mm Square / Dustproof
- One million rotational cycles
- Thin profile
- RoHS compliant\*

## Applications

- Volume control on audio equipment
- Motion controllers
- Dishwasher control systems
- Automotive temperature range

# 3382 - 12 mm Rotary Position Sensor

## Electrical Characteristics

### Standard Resistance Range

..... 2.5K to 100K ohms  
Resistance Tolerance .....  $\pm 30\%$  std.  
Linearity .....  $\pm 2\%$   
Resolution ..... Essentially infinite  
Insulation Resistance @ 500 VDC  
..... 100 megohms min.

### Dielectric Strength

Sea Level ..... 500 VAC  
70,000 Feet ..... 350 VAC  
Adjustment Angle .....  $330^\circ$  nom.

## Environmental Characteristics

### Power Rating (16 volts max.)

50 °C ..... 0.05 watt  
120 °C ..... 0 watt

### Operating Temperature Range

.....  $-40^\circ\text{C}$  to  $+120^\circ\text{C}$

Temperature Coefficient .....  $\pm 500$  ppm/°C

Humidity ..... TRS  $\pm 20\%$

Shock ..... 20 G TRS  $\pm 10\%$ ; VRS  $\pm 10\%$

Load Life @ 50 °C Rated Power

..... TRS  $\pm 10\%$ -20 %

Rotational Life ..... 1,000,000 cycles

..... TRS  $\pm 20\%$

Thermal Shock ..... 5 cycles

..... TRS  $\pm 20\%$ ; VRS  $\pm 10\%$

## Physical Characteristics

Mechanical Angle ..... Continuous rotation

Torque ..... 30 gf-cm max.

Weight ..... Approximately 0.0321 g

Marking ..... Resistance code

and date code

### Standard Packaging

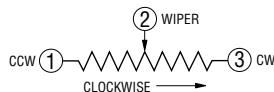
G Style ..... 1000 pcs./13" reel

H Style ..... 50 pcs./tube

IP Rating ..... IP40

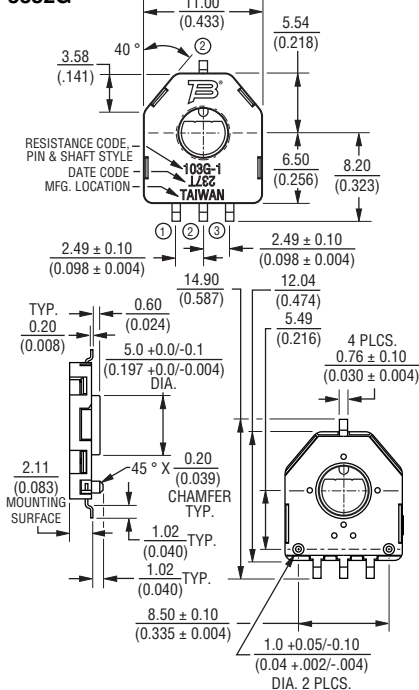
## Standard Resistance Table

Resistance (Ohms)	Resistance Code
2,500	252
5,000	502
10,000	103
25,000	253
50,000	503
100,000	104



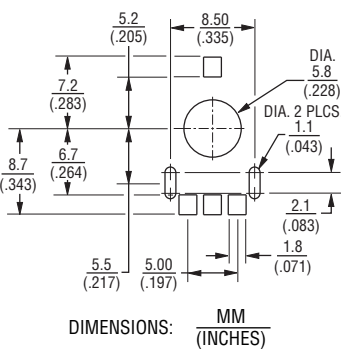
## Product Dimensions

### 3382G



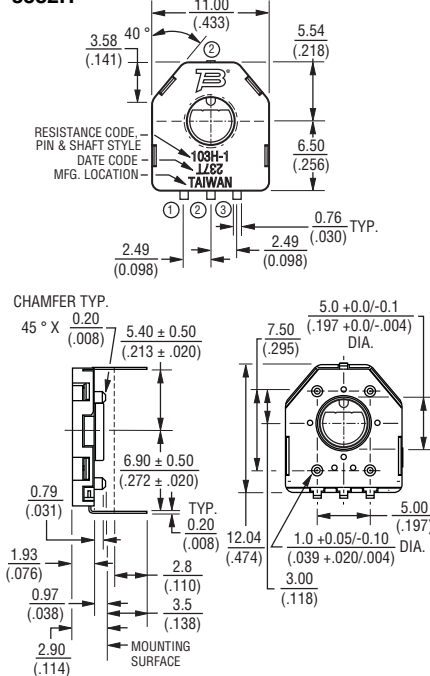
NOTE: ALL TERMINATIONS TO BE COPLANAR WITHIN  $\frac{0.1}{(0.001)}$

## Recommended Land Pattern

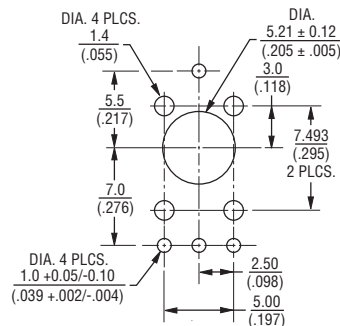
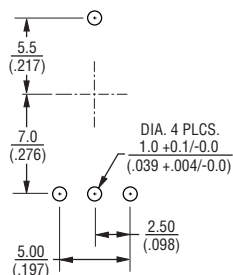


DIMENSIONS: MM (INCHES)

### 3382H



## Recommended Land Patterns



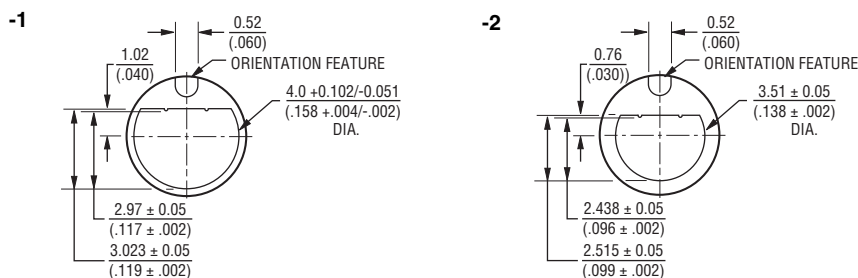
TOLERANCES:  $\pm 0.30$  UNLESS OTHERWISE NOTED  
 $\pm (0.12)$

\*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011. Specifications are subject to change without notice. The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.

# 3382 - 12 mm Rotary Position Sensor

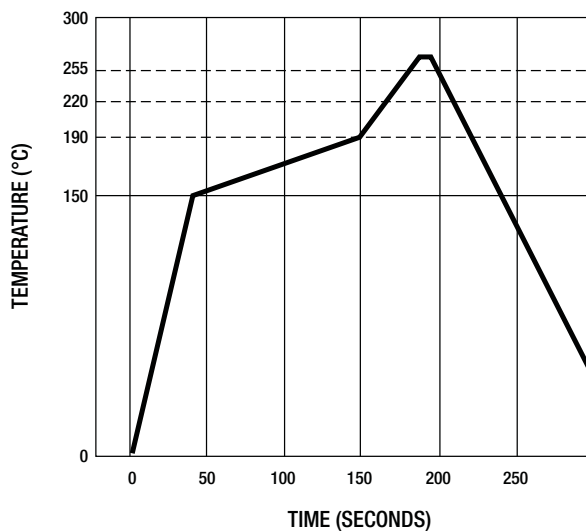
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## Rotor Dimensions



## Processing Information

Process Description	Materials	Temperature	Time Interval
1. Apply solder paste to test board (8 - 10 mil thick)	<ul style="list-style-type: none"> <li>Sn/Ag/Cu Alloy water soluble or no clean solder paste</li> <li>Single sided epoxy glass (G10) (UL approved)</li> <li>PC board approx. 4x4x.06 in.</li> </ul>	Room temperature	
2. Place test units onto board	6 units/board		
3. Ramp up	Convection oven		2.5 °C ±0.5 °/second
4. Preheat		150 °C to 190 °C	90 ±30 seconds
5. Time above liquidus		220 °C	60-90 seconds
6. Peak temperature			260 °C +0 °/-5 ° 10-20 sec. within 5 °C of peak
7. Ramp down		Room temperature	3 °C ±0.5 °C/second

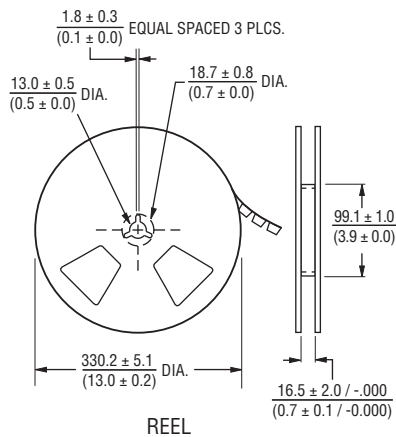
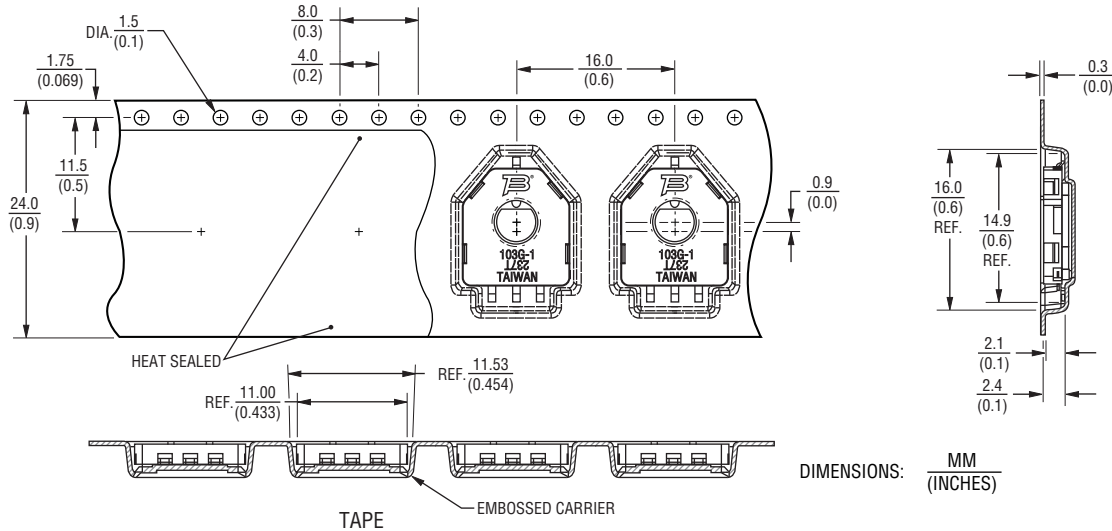


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## Packaging Specifications



## How To Order

**3382 G - 1 - 103 G**

Model \_\_\_\_\_

Style \_\_\_\_\_

G = SMD with 8.5 mm Locator Pin Spacing  
H = Through-hole with 5 mm x 7.5 mm Locator Pin Spacing

Standard Product Indicator \_\_\_\_\_

-1 = 4 mm Shaft Diameter  
-2 = 3.5 mm Shaft Diameter

Resistance Code \_\_\_\_\_

Packaging Designator \_\_\_\_\_

G = 1000 pcs./13 " Reel (G Style)  
Blank = 50 pcs./Tube (H Style)

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[3382G-1-103G](#)